AMENDMENTS TO THE CLAIMS

Pursuant to 37 C.F.R. § 1.121 the following listing of claims will replace all prior versions, and listings, of claims in the application.

Claims 1-20 (Canceled).

Claim 21 (Currently amended): An electrode for an electro-surgical operation device, comprising:

a hollow electrode formed in a hollow tube shape extending from a closed tip and including at least one hole formed thereon;

a first non-insulation area formed to a predetermined length from the closed tip;

a first insulation area formed on an outside surface of the hollow electrode beginning at the predetermined length from the closed tip;

a refrigerant tube, having a smaller diameter than a diameter of the hollow electrode, inserted into the hollow electrode, the refrigerant tube configured to circulate pressurized refrigerants so as to supply refrigerants from outside of a living body into the hollow electrode to cool a living tissue in contact with at least one of the closed tip and the hollow electrode, and to discharge the heat-exchanged refrigerants out of the living body, the pressurized refrigerants being a pressurized saline solution; and

a pressurized refrigerant discharging mechanism formed in the first non-insulation area, operable to externally discharge a portion of the circulated pressurized refrigerants into the living tissue in contact with at least one of the closed tip and the hollow electrode, by acting as a discharge

resistance to the pressurized refrigerants, so as configured to control at all times a flow of the pressurized refrigerants from all holes in the hollow electrode, resulting to prevent the pressurized refrigerants from explosively spouting.

Claim 22 (Currently amended): The electrode of claim 21, further comprising:

a saline solution pipe sheathing around the outside surface of the hollow electrode with a predetermined gap, and having a second non-insulation area at another predetermined length toward the closed tip and a second insulation area on an outside surface of the saline solution pipe except the second non-insulation area;

the saline solution pipe operable to infuse a saline solution having a ~~relatively low~~ pressure less than 700 KPa through the gap, and discharge the saline solution through at least one second hole formed on an outside surface of the second non-insulation area.

Claim 23 (Previously Presented): The electrode of claim 22, wherein the hollow electrode and the saline solution pipe are conductive so that power is differently applied thereto; and

an insulation member is formed on the surface of the hollow electrode and configured to prevent short circuit of the saline solution supplied through the gap between the hollow electrode and the saline solution pipe.

Claim 24 (Previously Presented): The electrode of claim 23, wherein the insulation member comprises the first insulation area formed on the surface of the hollow electrode, and an insulation packing provided between the hollow electrode and the saline solution pipe.

Claim 25 (Previously Presented): The electrode of claim 21, wherein the pressurized refrigerant discharging mechanism is a porous metal sintered body formed in the first non-insulation area;

the sintered body operable to act a discharge resistance to the pressurized refrigerants supplied through the refrigerant tube, so as to control the volume of the discharged pressurized refrigerants.

Claim 26 (Currently amended): A method for an electro-surgical operation comprising:

inserting an ablation device including at least one electrode into a wanted region in a living body; and

ablating the wanted region with RF energy, when pressurized refrigerants are circulated between outside of the living body and inside the electrode so as to cool a living tissue in contact with the electrode and a portion of the circulated pressurized refrigerants discharge from at least one hole formed on the electrode into the living tissue due to a discharge resistance to the pressurized refrigerants, the discharge resistance configured to control at all times a flow of the pressurized refrigerants from all holes in the electrode.

Claim 27 (Currently amended): The method of claim 26, wherein a refrigerant having a ~~relatively low~~ pressure less than 700 KPa is additionally supplied into the living tissue through at [[lest]] least one different channel from a channel for circulating the pressurized refrigerants so as to cool the living tissue.

Claim 28 (Canceled).

Claim 29 (Previously Presented): The electrode of claim 21, wherein the pressurized refrigerant discharging mechanism comprises:

at least one first hole formed on an outside surface of the first non-insulation area, the at least one first hole operable to externally discharge a portion of the circulated pressurized refrigerants into the living tissue in contact with at least one of the closed tip and the hollow electrode; and

a flow control mechanism formed on the outside surface of the first non-insulation area, and operable to act as a discharge resistance to the pressurized refrigerants discharged from the at least one first hole, so as to control a flow of the pressurized refrigerants.

Claim 30 (Previously Presented): The electrode of claim 21, wherein the closed tip of the hollow electrode is a conductive spearhead, and the hollow electrode and the spearhead are incorporated with each other.

Claim 31 (Previously Presented): The electrode of claim 29, wherein the flow control mechanism is a hollow tube sheathing around the outside surface of the first non-insulation area, and having a third hole on the outside surface of the hollow tube, the flow control mechanism controlling a volume of the discharged pressurized refrigerants by alternately aligning the at least

one first hole of the hollow electrode and the third hole of the hollow tube and operating as a discharge resistance to the pressurized refrigerants discharged from the at least one first hole.

Claim 32 (Previously Presented): The electrode of claim 31, wherein the flow control mechanism is compression units on an inside surface of the hollow tube which are formed in a zigzag shape on a discharge passage from the at least one first hole to the third hole, and operated as discharge resistances to the pressurized refrigerants discharged from the at least one first hole, so as to control the volume of the discharged pressurized refrigerants.

Claim 33 (Previously Presented): The electrode of claim 29, wherein the flow control mechanism is a porous metal sintered body layer formed on the outside surface of the first non-insulation area;

the sintered body layer operable to act a discharge resistance to the pressurized refrigerants discharged from the at least one first hole, so as to control the volume of the discharged pressurized refrigerants.

Claim 34 (Previously Presented): The electrode of claim 21, wherein the pressurized refrigerants have a pressure of approximately 700 to 1060 kPa.